

# PATENT ABSTRACTS OF JAPAN

(11)Publication number : 62-055973

(43)Date of publication of application : 11.03.1987

(51)Int.Cl.

H01L 33/00  
B41J 3/21  
G03G 21/00  
G09F 9/33

(21)Application number : 60-194749

(71)Applicant : COPAL CO LTD

(22)Date of filing : 05.09.1985

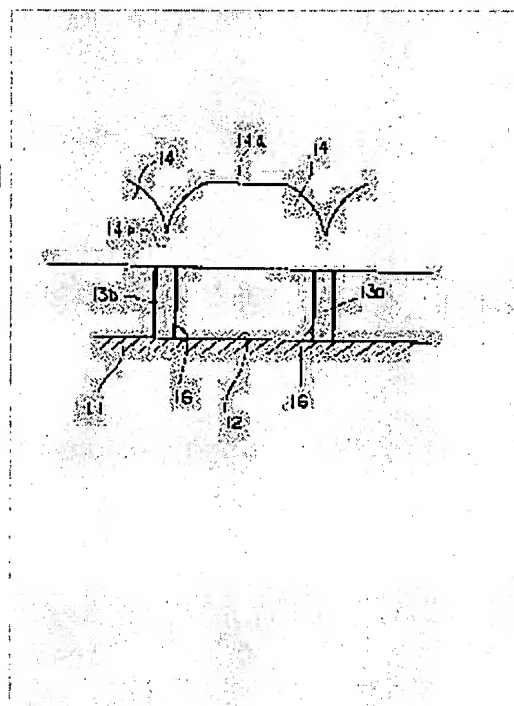
(72)Inventor : KATAGIRI CHIHARU  
KUMOMURA YASUYUKI  
OOYAMA YOSHIHIRO

## (54) LED LIGHT SOURCE

### (57)Abstract:

PURPOSE: To obtain a line light source which does not scatter light to an unnecessary range by securing an LED chip which becomes a light source at the prescribed interval on a substrate when forming the line light source, coating the chip with a partition frame having a hole corresponding to the chip, and forming a flat convex lens with a convex shape on the upper surface over each hole.

CONSTITUTION: A plurality of LED chips 12 are secured in a linear shape at the prescribed interval to become a light source on a printed substrate 11, and a partition frame 13 having a plurality of holes for directly receiving incident lights are coated corresponding to the size of the chips 12. At this time, the frame 13 is formed of plastic, the hole is surrounded by walls 13a, 13b, and the exposed inner surface is colored with black to provide light absorption property. Thereafter, flat convex lenses 14 continued linearly in the partition wall state are mounted through a coupler 14b, and the projecting tops of the convex side are formed in a flat trapezoidal portion 14a. Thus, the lights incident to the chips 12 do not scatter to other region, nor have irregular intensity to become uniform light distribution.



---

## LEGAL STATUS

[Date of request for examination]

[Date of sending the examiner's decision of rejection]

[Kind of final disposal of application other than the examiner's decision of rejection or application converted registration]

[Date of final disposal for application]

[Patent number]

[Date of registration]

[Number of appeal against examiner's decision of rejection]

[Date of requesting appeal against examiner's decision of rejection]

[Date of extinction of right]

Copyright (C); 1998,2003 Japan Patent Office